(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 2 June 2005 (02.06.2005)

PCT

(10) International Publication Number WO 2005/049810 A1

(51) International Patent Classification⁷: A61K 38/17

C12N 5/06,

(21) International Application Number:

PCT/US2004/038059

(22) International Filing Date:

15 November 2004 (15.11.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/520,762

17 November 2003 (17.11.2003) U.

- (71) Applicant (for all designated States except US): GEN-ZYME CORPORATION [US/US]; 500 Kendall Street, Cambridge, MA 02142 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): YAEGER, Peter, C. [US/US]; 19 Robin Hood Road, Natick, MA 01760 (US). STEWART, Jeffrey, D. [US/US]; 5 East Charles Street, Milford, MA 01757 (US). WENTWORTH, Bruce, M. [US/US]; 27 Ridge Road, Northborough, MA 01532 (US).
- (74) Agent: McDONELL, Leslie, A.; Finnegan, Henderson, Farabow, Garrett & Dunner, L., L.P., 1300 I Street NW, Washington, DC 20005-3315 (US).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

2005/049810 A1

(54) Title: SKELETAL MUSCLE-DERIVED CELLS AND METHODS RELATED THERETO

(57) Abstract: The disclosure provides methods of propagating skeletal muscle cell (SkMC) cultures enriched in differentiation-competent myoblasts that express normal levels of CD56 and reduced levels of desmin. The methods comprise culturing SkMCs in a mitogen-rich cell culture medium supplemented with TGF- β . The disclosure also provides therapeutic methods utilizing SkMCs propagated in TGF- β , e.g., methods of treating myocardial infarction by transplantation of autologous or allogeneic SkMCs.